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## **CLAIMS**

 A method of systematically diagnosing data problems in a database, comprising the steps of:

identifying a set of tests to be performed on the database;

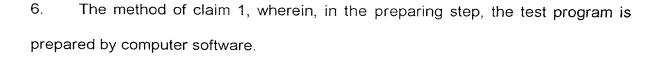
preparing a test program corresponding to the set of tests using SQL

(Structured Query Language);

executing the test program on the database so that the set of tests are performed on the database simultaneously; and

automatically providing results of the test program in a predetermined format, whereby data problems in the data base can be diagnosed by viewing the results.

- 2. The method of claim 1, wherein the predetermined format is a table format.
- 3. The method of claim 1, wherein the preparing step is implemented using WITH and OUTER JOIN commands of the SQL.
- 4. The method of claim 1, wherein at least one of the set of tests involves performing a test on a particular record stored in a table of the database, said record being identifiable by one or a combination of key values.
- 5. The method of claim 1, wherein, in the preparing step, the test program is prepared manually.



- 7. The method of claim 1, wherein the preparing step includes:
  displaying a set of predetermined queries to a user;
  receiving the user's response to each of the predetermined queries; and
  preparing the test program based on the user's response.
- 8. A system for systematically diagnosing data problems in a database, comprising: a database including a plurality of tables, each table containing at least one row of data, each row identifiable by one or a combination of key values; and

a testing module, coupled to the database, for storing a test program written in SQL (Structured Query Language), executing the test program on the database, and automatically providing results of the test program in a predetermined format, wherein the test program corresponds to a collection of tests for diagnosing data problems in the database.

- 15 9. The system of claim 8, wherein the predetermined format is a table format.
  - 10. The system of claim 8, wherein the test program includes WITH and OUTER JOIN commands of the SQL.

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- 11. The system of claim 10, wherein each of the collection of tests is represented by a query, and these queries are combined as a larger query using the WITH and OUTER JOIN commands.
- 12. The system of claim 8, wherein one of the collection of tests involves performing a test on a particular record stored in a table of the database, said record being identifiable by one or a combination of key values.
- 13. The system of claim 8, wherein the test program stored in the testing module is prepared manually.
- 14. The system of claim 8, wherein the test program stored in the testing module is prepared by computer software.
- 15. The system of claim 8, further comprising:

an interface for displaying a set of predetermined queries to a user and receiving the user's response to each of the predetermined queries,

wherein the test module prepares the test program based on the user's response.

16. A computer program product embodied on computer readable media readable by a computing device, for systematically diagnosing data problems in a database, the product comprising computer executable instructions for:

identifying a set of tests to be performed on the database;

preparing a test program corresponding to the set of tests using SQL (structured query language);

executing the test program on the database so that the set of tests are performed on the database simultaneously; and

automatically providing results of the test program in a predetermined format, whereby data problems in the data base can be diagnosed systematically.

- 17. The computer program product of claim 16, wherein the predetermined format is a table format.
- 18. The computer program product of claim 16, wherein the preparing instructions are performed using WITH and OUTER JOIN commands of the SQL.
- 19. The computer program product of claim 16, wherein one of the set of tests involves performing a test on a particular record stored in a table of the database, said record being identifiable by one or a combination of key values.
- 15 20. The computer program product of claim 16, wherein the preparing instructions include computer executable instructions for:

displaying a set of predetermined queries to a user; receiving the user's response to each of the predetermined queries; and preparing the test program based on the user's response.